



**An interdisciplinary approach to palliative care of people at risk of delirium**

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IMPACCT – Improving Palliative, Aged and Chronic Care through Clinical Research and Translation

**Objectives**

1. Consider attitudes to people with delirium
2. Provide a brief overview of evidence for delirium prevention, treatment and supportive care
3. Discuss nurses' role and responsibilities in providing optimal interdisciplinary care of the person at risk of/with delirium, and their family, including maintenance of human dignity and personhood

**DSM-5 diagnostic criteria**



- A. Disturbed Attention and Awareness
- B. Disturbance develops over a short period of time, is a change from Baseline, tends to fluctuate in severity over the course of the day
- C. An additional disturbance in Cognition
- D. A and C are not better explained by another pre-existing, established or evolving neurocognitive disorder (i.e. Dementia) nor in context of severely reduced level of consciousness, such as coma
- E. Evidence of an Etiological cause

American Psychiatric Association, 2013

**Delirium in palliative care contexts is...**

1. Prevalent
2. Distressing and debilitating
3. An area with many evidence-practice gaps

**I believe...**

1. Caring for a person who is delirious when receiving palliative care is...
2. A person with delirium needs...
3. The family of the person who is delirious needs...

**Issues for care**

Prevention	Addressing distress
Detection	<ul style="list-style-type: none"> <li>• Functional change</li> </ul>
Assessment:	<ul style="list-style-type: none"> <li>• Hypoactive, sleep and cognitive symptoms</li> </ul>
<ul style="list-style-type: none"> <li>• Reversibility</li> <li>• Patient goals of care and phase of illness</li> </ul>	<ul style="list-style-type: none"> <li>• Perceptual disturbance</li> </ul>
Maintaining patient and staff safety	<ul style="list-style-type: none"> <li>• Adequate pain and symptom management balanced with managing psychoactive medication</li> </ul>
Communication	

■ Global café

**Table 1: Non-pharmacological strategies**

**Table 2: Pharmacological intervention**



Delirium treatment in advanced illness:  
Professor Meera Agar

<https://www.youtube.com/watch?v=tniCOZoj7AI>

**Conclusions**

- Non-pharmacological strategies have the strongest evidence
- Evolving evidence continue to NOT support a role for antipsychotics to improve patient outcomes
- Communication and information to families and the patient is fundamental and critical
- Improving care requires nurses to take ownership and work collaboratively to prevent, detect and treat delirium

 [delirium.org](http://delirium.org) A unified voice for advancing delirium science

Thank you




■ Global café/additional slides



**Patients and family value...**

Patients value being mentally aware, safe and having a sense of self and relationship with others

Family value:

- Information and respect and sensitivity shown for the person and their subjective experience
- Feel supported when clinicians demonstrate respect and understanding of the person's needs and wants, and address suffering in ways that allow communication with each other

Steinhauser et al 2000, Brajman 2003, Namba et al 2007, Spichiger 2008, Delgado-Guay et al 2016, Bolton et al 2016, Finucane et al 2017

**Prevention**

- Preventing delirium is more effective than trying to treat it once it has occurred
- Promoting physical and cognitive activity, sleep, hydration, vision and hearing reduces delirium incidence in older hospitalized patients by one in three cases
  - i.e. helping unwell people to move, think, sleep, drink, see and hear

Hsieh et al. 2015; Siddiq et al. 2016

Domain	Details
Cognition/ Orientation	<ul style="list-style-type: none"> <li>Mentally stimulating activities</li> <li>Orientation board with names of the carers and daily schedule</li> <li>Orientating communication</li> </ul>
Mobility	<ul style="list-style-type: none"> <li>Ambulation or active range-of-motion exercises</li> <li>Minimise use of tethers e.g. IDC</li> </ul>
Hearing	<ul style="list-style-type: none"> <li>Portable amplifying devices and special communication techniques, with daily reinforcement</li> <li>Ear wax clearing, as needed</li> </ul>
Vision	<ul style="list-style-type: none"> <li>Visual aids (glasses, magnifying lenses) and adaptive equipment (large illuminated telephone keypads, large print books, fluorescent tape on call bell)</li> </ul>
Sleep	<ul style="list-style-type: none"> <li>Warm milk or herbal tea, relaxation tapes or music, and back massage</li> <li>Noise reduction strategies</li> <li>Schedule care to allow uninterrupted sleep</li> </ul>
Hydration	<ul style="list-style-type: none"> <li>Encourage fluids</li> <li>Feeding assistance and encouragement during meals</li> </ul>

Hsieh et al. 2015; Siddiq et al. 2016

**Table 1. Delirium Risk Factors**

Predisposing factors	Precipitating factors	Additional risk factors in patients with co-morbidities
<b>Presumably modifiable</b> <ul style="list-style-type: none"> <li>Severity impairment (vision and hearing)</li> <li>Disoriented baseline performance status</li> <li>Multitasking</li> </ul> <b>Non-modifiable</b> <ul style="list-style-type: none"> <li>&gt;85 years</li> <li>Alcohol abuse</li> <li>Pre-existing impairment</li> <li>Multiple co-morbidities</li> <li>Current hip fracture</li> </ul>	<b>Presumably modifiable</b> <ul style="list-style-type: none"> <li>Polyprescription</li> <li>Anti-cholinergic load</li> <li>Inhibiting cofactor</li> <li>Use of physical restraints</li> <li>Drug interactions</li> <li>Dehydration</li> <li>Infection</li> <li>Diagnosis</li> <li>Pain</li> <li>Anxiety</li> <li>Exhausted state</li> <li>Prolonged hospital stay</li> </ul> <b>Less modifiable</b> <ul style="list-style-type: none"> <li>Metabolic disturbance</li> <li>Low albumin</li> <li>Environment</li> <li>Drug or alcohol withdrawal</li> </ul>	<b>Presumably non-modifiable</b> <ul style="list-style-type: none"> <li>Recurrent delirium</li> <li>Opioids</li> <li>Corticosteroids</li> <li>Other psychotropic medications</li> </ul> <b>Non-modifiable</b> <ul style="list-style-type: none"> <li>Pre-existing dementia</li> <li>Brain metastases</li> <li>Liver metastases</li> <li>Haemorrhagic infarction</li> <li>Mitochondria to focus or meningitis</li> </ul>

Agarwal. J Clinical Epidemiology and Health Services Evaluation Unit Melbourne Health 2006, Canadian Coalition for Seniors' Mental Health 2010, National Clinical Guideline Centre for Acute and Chronic Conditions 2010, Cavazzi 2013, Alamed, Laveist et al. 2014)

Table 1. Delirium risk factors

**Choosing an assessment tool for your setting**

Slide courtesy of P. Lawlor

**Comprehensive assessment**

- History, including reported symptoms of delirium and precipitating medical conditions, baseline cognition and previous episodes of delirium (some which may be from collateral history)
- Physical examination
- Likely causes and potential for reversibility
- Predicted prognosis
- Immediate, intermediate and longer term goals of care
- Decision-making capacity
- Level and cause of distress

**Comprehensive assessment**

- Safety: risk of falls, wandering, pressure areas and injury to self or others
- Preference for location of care
- Social, psychological, cultural or spiritual needs
- Family information and support needs
- Need for referral to psychiatric or geriatric specialists or services if delirium is severe and/or persisting
- Involves the person and his or her family and results in a plan of care

## Management and support

"Joining the dots"

- Obtain essential information about the person
- Include those with greatest contact with patient (who may have the weakest voice)

**Shared and interdisciplinary**

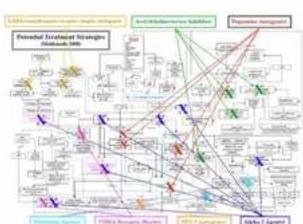
- Language based on diagnostic/assessment framework
- Decision-making about reversibility
- Understanding the person's wishes for active intervention
- Responsibility for delirium care
- View about goal/benefit and need for pharmacological and/or non-pharmacological therapies

Hosie, 2014

## Management and support

- Coordinated** (and congruent) communication with the person and family about cause of delirium, likely outcome, and management plan (short, medium and longer-term)
- Approach to care based on a **positive attitude** to people with delirium
- Safe space**
  - To raise conflicts about goals of particular therapies or perceived impact on patient
  - To raise the possibility of a diagnosis of delirium
  - To broach impact/stress of caring for a delirious patient
  - To bring peace in suffering and help loved ones to connect

## Pathophysiology



- Complex
- There may not be one 'unifying theory'
- Basic science underpinning to therapies is critical
- Therapeutic targets are now being considered in a more sophisticated manner

Maldonado Am J Geriatric Psychiatry 2013

Hypothesis	
Oxidative stress	Reduced cerebral oxidative metabolism/increased oxidative stress
Neurotransmitter hypothesis	ACH ↓, DA ↑, NE ↑, GLU ↑, 5HT ↑ ↓, H1 and H2 ↑ ↓, GABA ↑ ↓
Circadian disruption	Low levels of melatonin, loss of rhythm
Network disconnectivity	Failure of complex integration/connections (baseline level, level of inhibitory tone)
Neuroendocrine	HPA axis activation
Neuronal ageing	Age related neuronal changes (brain blood flow, vascular density, neuron loss, changes in neurotransmitters)
Neuronal inflammation	Propagation of peripheral immune stimuli to CNS

Maldonado Am J Geriatric Psychiatry 2013

## Pharmacological management

Outside palliative care uncertainty remains about the role of antipsychotics

- Seven RCTS suggest potential to improve overall delirium severity
- All had significant methodological limitations – flawed allocation concealment, inadequately powered and only three were placebo controlled
- Without adequately powered comparisons to placebo, it is not possible to evaluate if antipsychotics provide additional benefit to the natural resolution of delirium or possibly hinder recovery
- Open label studies also don't assist in understanding the additional contribution of antipsychotics
- Exploring improvements in delirium severity scores captures a whole range of symptoms that would not be target symptoms in palliative care clinical practice, and achieving complete delirium resolution in palliative care patients is often not possible.

Brellbart 1996, Hu 2004, Tahr 2010, Han 2004, Maneen 2013, Kim 2010, Devin 2010

## Trials in ICU

Two adequately powered placebo-controlled studies in ICU

- Oral haloperidol or ziprasidone in mechanically ventilated intensive care patients who had an abnormal level of consciousness or were receiving sedative or analgesic medications (MIND Trial)
- Intravenous haloperidol in critically ill adults (HOPE-ICU); and

**Found no difference delirium free nor coma free days, however inclusion did not require the presence of delirium.**

Grant et al 2010, Page et al 2013

**CLINICAL INVESTIGATIONS**

### Antipsychotic Medication for Prevention and Treatment of Delirium in Hospitalized Adults: A Systematic Review and Meta-Analysis

Karin J. Newfeld, MD, MPH,<sup>1\*</sup> Irving Yee, MD,<sup>2†</sup> Thomas N. Robinson, MD, MPH,<sup>3</sup> Sharon K. Inouye, MD, MPH,<sup>4,5,7\*</sup> and Dale M. Needham, MD, PhD<sup>6</sup>

**OBJECTIVES:** To evaluate the effectiveness of antipsychotic medication in preventing and treating delirium.

**DESIGN:** Systematic review and meta-analysis.

**SETTING:** PubMed, EMBASE, CINAHL, and ClinicalTrials.gov databases were searched from January 1, 1990, to November 26, 2013.

**PATIENTS:** Adult surgical and medical inpatients.

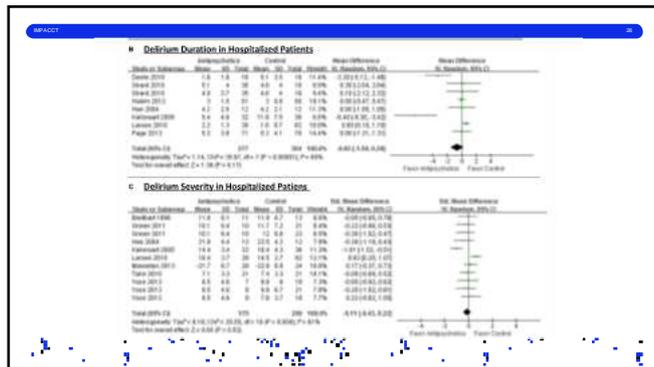
**INTERVENTION:** Antipsychotic administration for delirium prevention or treatment in randomized controlled trials.

**MEASUREMENTS:** Two authors independently assessed all citations, extracted relevant data, and assessed studies for potential bias. Heterogeneity was considered in the square  $P < .1$  or  $I^2 > 50\%$ . Using a random-effects model ( $P > 50\%$ ), or a fixed-effects model ( $P < 50\%$ ), odds ratios (ORs) were calculated for delirium outcomes (delirium incidence and severity), and mean or standardized mean difference for continuous outcomes (delirium duration, severity, hospital and intensive care unit [ICU] length of stay [LOS]). Sensitivity analyses included propensity score analysis, exclusion of studies with high risk of bias, and typical versus atypical antipsychotics.

**RESULTS:** Screening of 10,877 eligible records identified 19 studies. In seven studies comparing antipsychotics with placebo or no treatment for delirium prevention after surgery, there was no significant effect on delirium incidence (OR = 0.56, 95% confidence interval [CI] = 0.23-1.34,  $P > 50\%$ ). Using data reported from all 19 studies, antipsychotic use was not associated with change in delirium duration, severity, or hospital LOS (LOS with high heterogeneity among studies). No association with overall  $P$  was detected (OR = 0.80, 95% CI = 0.62-1.25,  $P > 50\%$ ).

**CONCLUSIONS:** Current evidence does not support the use of antipsychotics for prevention or treatment of delirium. Additional methodologically rigorous studies using standardized outcome measures are needed. *J Am Geriatr Soc* 2016.

**Key words:** delirium; pharmacological prevention; pharmacological treatment; delirium.



### Guideline recommendations

Pharmacological therapy should only be considered in the delirious patient with **severe behavioral or emotional disturbance where their behavior threatens their own safety or safety of others, is causing significant distress and likely to interfere with care**

If a delirious person is distressed or at risk to themselves or other and verbal and nonverbal de-escalation techniques are ineffective or inappropriate, consider short term (usually one week or less) antipsychotic medication. **Start at lowest clinically appropriate dose and titrate cautiously according to symptoms**

CPGs for the management of delirium in older people 2006; NICE guidelines: Delirium: diagnosis, prevention and management, 2010

### Most recent recommendations

"Benzodiazepines should be avoided in patients at risk of delirium."  
 "There is no evidence to support the use of antipsychotics as a treatment for delirium in older hospitalized adults."

ACSQHC, 2013

### Efficacy of Oral Risperidone, Haloperidol, or Placebo for Symptoms of Delirium Among Patients in Palliative Care: A Randomized Clinical Trial

Background: Antipsychotics are widely used for delirium symptoms in palliative care, but efficacy has been established in only a few studies.

Objective: To determine whether 1 of 3 oral antipsychotics (risperidone, haloperidol, or placebo) was more effective than placebo in reducing delirium symptoms in palliative care patients.

Design: Randomized controlled trial. Study was conducted in 10 palliative care units in 3 hospitals in the United Kingdom from 2010 to 2012. The trial was registered with ClinicalTrials.gov (NCT00111111).

Setting: Palliative care units in 3 hospitals in the United Kingdom.

Participants: 100 patients with delirium symptoms in palliative care.

Interventions: Risperidone, haloperidol, or placebo.

Main Results: At baseline, 100 patients were enrolled. The mean age was 75 years (SD, 10 years). The mean duration of delirium symptoms was 4 days (SD, 3 days). The mean duration of palliative care was 12 days (SD, 10 days). The mean duration of hospital stay was 21 days (SD, 10 days). The mean duration of delirium symptoms was 4 days (SD, 3 days). The mean duration of palliative care was 12 days (SD, 10 days). The mean duration of hospital stay was 21 days (SD, 10 days).

Conclusions: Risperidone, haloperidol, or placebo was not more effective than placebo in reducing delirium symptoms in palliative care patients.